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Water Supply Outlook For Idaho

series
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SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

IDaho SOIL CONSERVATION DISTRICTS
IDaho DEPARTMENT OF WATER RESOURCES

AS OF
April 1, 1982

IMPORTANT NOTICE INSIDE

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



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IMPORTANT NOTICE

WATER SUPPLY OUTLOOK FOR IDAHO

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WATER SUPPLY OUTLOOK FOR IDAHO

and
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Issued by

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SOIL CONSERVATION SERVICE
WASHINGTON, D C



Released by

AMOS I. GARRISON, JR.

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
BOISE, IDAHO

In Cooperation with

A. KENNETH DUNN

DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES



Report prepared by

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SNOW SURVEY SECTION
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WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY FOR APRIL 1, 1982

The April 1 snow surveys show Idaho's snowpack to range from near normal to well above normal throughout the state. The northern portion of the state, from the Clearwater drainage north, is average to slightly above while the southern portion, from the Salmon River drainage south, varies from 119 percent to 150 percent of average for the water year. Exceptions in the southern portion are the Beaver-Camas Creek area east of Dubois and the Weiser River where snowpack is 100 to 108 percent of normal, and the Owyhee River drainage where the snowpack is extremely high at 190 percent of average.

The last half of March was an extremely high snowfall period over most of the state with many higher elevation sites increasing 7 to 15 inches in snow water content or nearly 200 percent of normal for the month. The low elevation snowpack began to melt with mild temperatures the first part of March but recovered to normal or well above normal by the end of the month.

Precipitation has been well above normal in Idaho for the past six months. For March the average across the state was 157 percent of average with a range of 106 percent at Porthill in North Idaho to 263 percent at Ketchum in the Sun Valley area. For the water year the state stands at 149 percent with a peak of 207 percent at Grace in the southeast.

Water supplies are forecast to be good to excellent throughout the state. April through September streamflows are predicted to range from 106 percent

of average on the Priest River in North Idaho to 199 percent on the Owyhee River in Southern Idaho.

Soil moisture conditions in the lower and middle elevation zones are saturated and are wet in the higher elevations.

In general, most reservoir storages are below normal and many reservoirs are being lowered even further to handle the expected high runoff.

A potential for high volume flows does exist on many Idaho streams. April and May weather conditions will dictate how much if any will occur. Continued cold weather over the next several weeks would not allow low elevation snowpacks to dissipate. This could result in high and low elevation snowpacks being melted simultaneously resulting in higher peak flows. Precipitation in the form of rain on the existing snowpack would also increase the potential for high peak flows. Several areas of concern are the Portneuf, Big Wood, Boise, Bruneau and Owyhee Rivers.

VALLEY PRECIPITATION 1/

Division Averages and Departures

In Inches

DRAINAGE DIVISIONS	Winter March 1982		Fall - Winter Nov. 81 - March 82	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U.S.	1.99	+ .25	14.44	+ 1.05
Flathead	1.95	+ .42	12.86	+ 2.13
Clark Fork	1.97	+ .75	10.59	+ 2.59
Pend Oreille-Spokane	3.45	+ .92	19.70	+ 2.15
Upper Snake	2.39	+ .87	14.21	+ 4.10
Snake River Plain	1.45	+ .67	7.16	+ 2.08
Salmon-Payette-Boise	1.96	+ .23	16.88	+ 5.09
Clearwater	3.06	+ .10	20.15	+ 2.27
Owyhee-Malheur	1.20	+ .35	9.20	+ 3.53

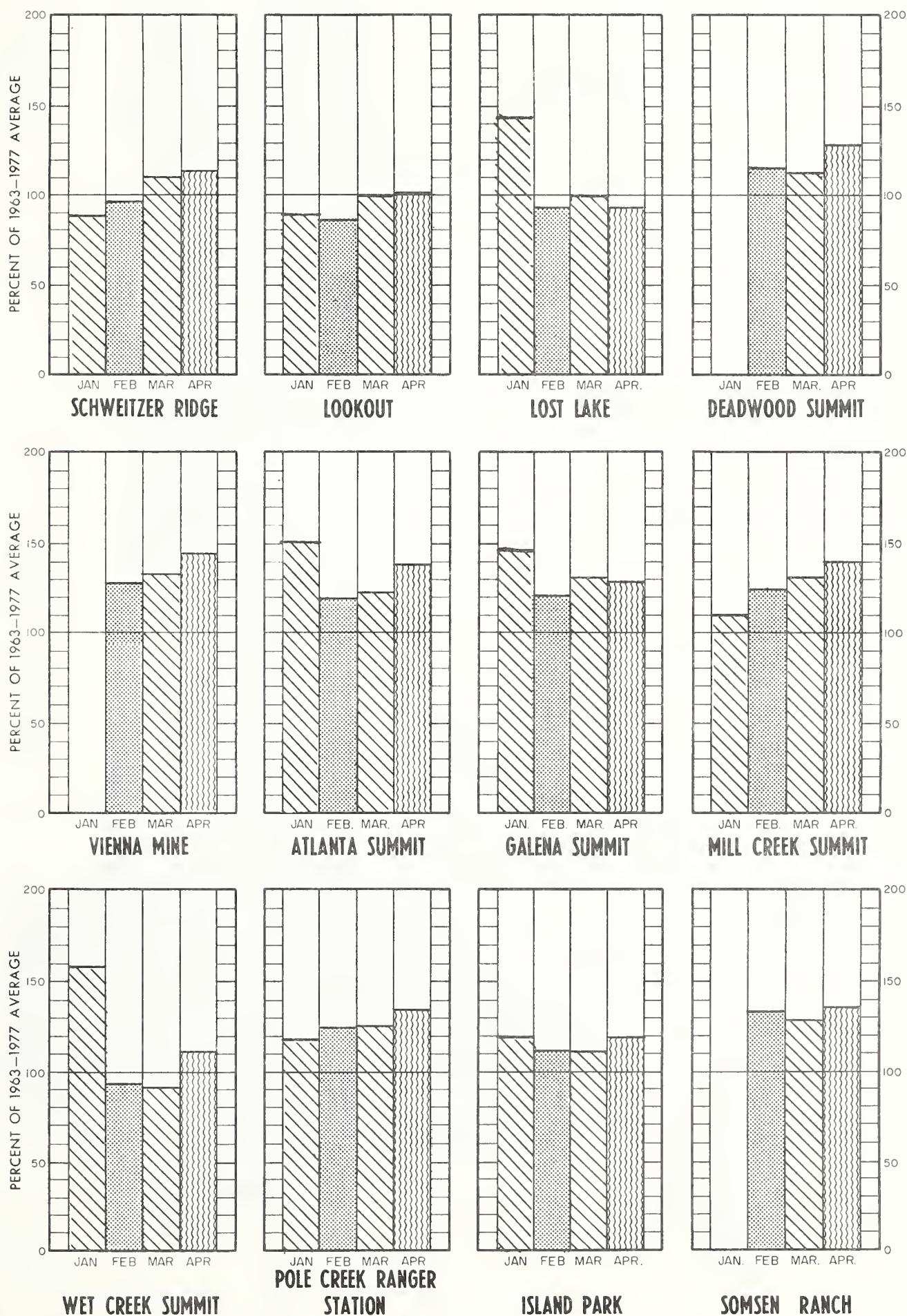
1/ Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

2/ Departure from 15-year (1963-1977) drainage division averages.

**SNOW WATER DEPTHS ACCUMULATION
For Selected Snow Courses**

As Compared To 1963 - 1977 15 Year Average

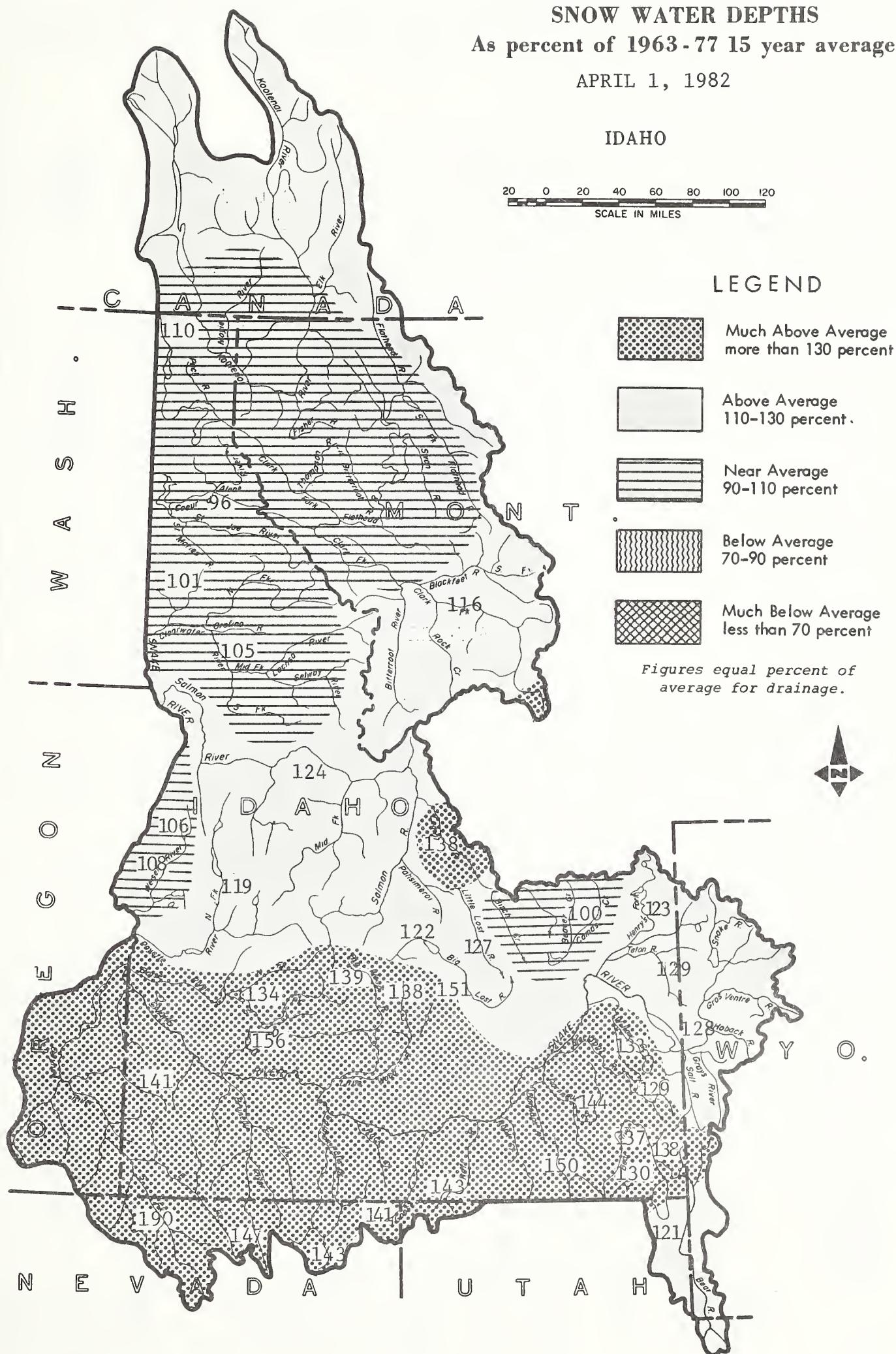
APRIL 1, 1982



COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF : LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA BASIN</u>			
Kootenai River	51	165	109
Pend Oreille River	128	173	111
Clark Fork River	86	196	116
Flathead River	42	148	104
Priest River	5 - 6	165	110
Spokane River	14 - 15	244	96
Hayden Creek	4	3640	--
<u>LOWER SNAKE RIVER BASIN</u>			
Palouse River	3	651	101
Clearwater River	19 - 21	219	105
Salmon River	21 - 26	188	124
Lemhi River	6	188	138
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	5	217	127
Big Lost River	9	146	122
Fish Creek	2	298	151
Little Wood River	4	205	138
Big Wood River	10 - 12	205	139
Boise River	17 - 20	249	134
Canyon Creek	3	427	156
Payette River	14 - 17	191	119
Weiser River	6 - 8	163	106
Mann Creek	4 - 5	155	108
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	5 - 7	213	143
Goose-Trapper Creek	3 - 5	219	141
Salmon Falls Creek	10	254	143
Bruneau River	4	242	147
Owyhee River	6	597	190
Jordan Creek	3	332	141
<u>UPPER SNAKE RIVER BASIN</u>			
Snake Basin - Above Palisades Reservoir	33	238	128
Camas-Beaver Creeks	3	149	100
Henrys Fork River	7	194	123
Teton River	8	231	129
Willow Creek	5 - 9	254	133
Blackfoot River	3 - 6	259	129
Portneuf River	4 - 10	251	144
<u>GREAT BASIN</u>			
Bear River - Upper	6	194	121
Bear River - Lower	25	284	130
Montpelier Creek	6	378	138
Mink Creek	7	264	137
Cub River	3 - 4	245	130
Malad River	4 - 6	316	150

SNOW WATER DEPTHS
As percent of 1963-77 15 year average
APRIL 1, 1982



RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2158.0	2646.0	2016.0
Flathead	1791.0	750.4	745.6	775.7
Pend Oreille	1155.1	549.0	532.8	432.9
Noxon	334.6	312.1	158.7	191.9
<u>Spokane</u>				
Coeur d'Alene	225.1	166.7	170.4	149.9
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	624.4	459.6	563.6	612.9
Palisades	1200.0	404.4	1194.1	815.9
American Falls	1673.0	1548.0	1669.1	1390.8
Island Park	127.0	123.1	131.5	122.5
Grassy Lake	15.2	13.0	12.9	10.8
Brownlee	980.2	359.0	660.0	395.5
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	31.4	31.4	33.1
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	33.8	62.5	63.7
<u>Big Lost</u>				
Mackay	44.2	31.2	44.1	32.9
<u>Big Wood</u>				
Magic	191.5	109.3	145.0	129.9
<u>Little Wood</u>				
Little Wood	30.0	18.4	28.3	18.5
<u>Fish Creek</u>				
Carey Valley	14.4	8.4	9.4	--
<u>Boise</u>				
Anderson Ranch	423.2	212.6	319.6	248.5
Arrowrock	286.6	137.1	286.4	226.6
Lucky Peak	278.2	97.2	242.4	115.5
Lake Lowell (Deer Flat)	169.0	128.8	154.5	139.3
<u>Owyhee</u>				
Owyhee	715.0	701.3	605.6	553.2
<u>Payette</u>				
Cascade	653.2	356.9	557.5	305.4
Deadwood	161.9	100.0	122.2	92.0
<u>Weiser</u>				
Mann Creek	11.1	8.8	11.2	--
<u>Clearwater</u>				
Dworshak	2016.0	157.9	1592.3	--
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	957.6	1067.4	1039.5

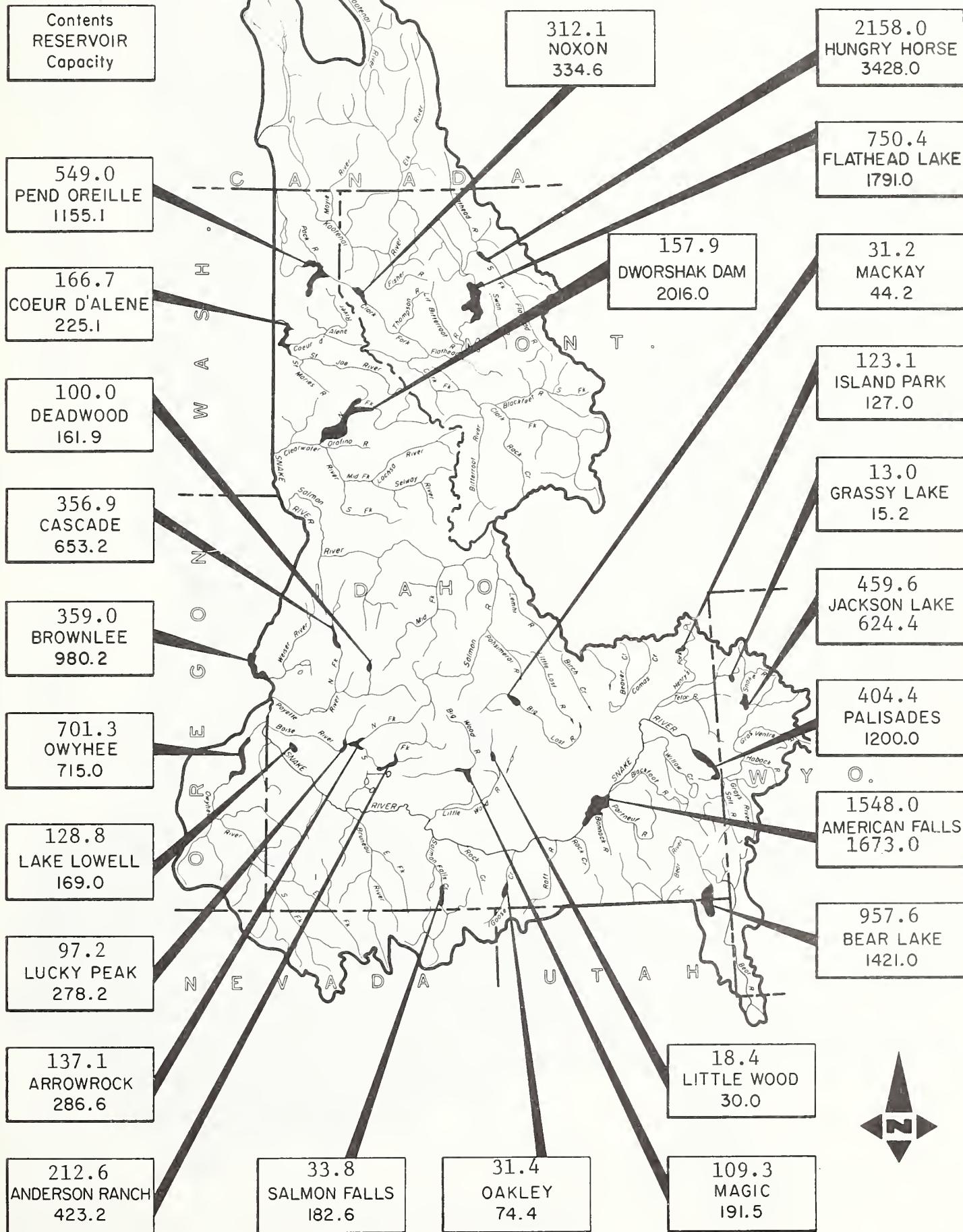
*Period of Record.

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

APRIL 1, 1982

50 0 50 100 150
SCALE IN MILES



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST C		FORECAST PERIOD	THOUSAND ACRE FEET
	Thousand Acre Feet	Percent of Average		Last Year
				Average +

UPPER COLUMBIA BASINKOOTENAI RIVER

Leonia	(at)	9380	106	Apr-Sep	--	8858
		8160	106	Apr-Jul	--	7708
		6520	106	Apr-Jun	--	6144

PEND OREILLE RIVERClark Fork River

Whitehorse Rapids	(at)	15800	115	Apr-Sep	--	13781
		14400	115	Apr-Jul	--	12519
		12200	115	Apr-Jun	--	10633

Priest River

Priest River <u>1/</u>	(at)	952	106	Apr-Sep	--	895
		895	106	Apr-Jul	--	841

SPOKANE RIVER

Post Falls <u>2/</u>	(at)	3270	112	Apr-Sep	--	2910
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St. Joe River

Calder	(at)	1450	111	Apr-Sep	--	1309
		1370	111	Apr-Jul	--	1238

SNAKE RIVER BASINSNAKE RIVER - MAIN STEM

Moran <u>3/</u>	(at)	1125	125	Apr-Sep	--	903
Palisades Inflow <u>3/</u>		4840	125	Apr-Sep	--	3863
Heise <u>4/</u>	(nr)	5230	123	Apr-Sep	--	4247
Blackfoot <u>5/</u>	(nr)	5600	122	Apr-Jul	--	4579

Henrys Fork

Ashton <u>6/</u>	(nr)	810	110	Apr-Sep	--	737
Rexburg <u>7/</u>	(nr)	1810	118	Apr-Sep	--	1534

Portneuf River

Topaz	(at)	148	137	Mar-Sep	--	108
-------	------	-----	-----	---------	----	-----

Oakley Reservoir Inflow

		49	136	Mar-Sep	--	36
--	--	----	-----	---------	----	----

Salmon Falls Creek

San Jacinto	(nr)	135	142	Mar-Sep	--	95
		128	142	Mar-Jul	--	90
		122	144	Mar-Jun	--	85

(c) Assuming normal meteorological conditions.

PROSPECTIVE STREAMFLOW

Based on Snow Surveys made on approximately

APRIL 1, 1982

IDAHO

A horizontal scale bar with numerical markings at 20, 0, 20, 40, 60, 80, 100, and 120. The word "SCALE IN MILES" is centered below the bar.

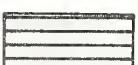
LEGEND



Much Above Average
more than 130 percent



Above Average
110-130 percent



Near Average
90-110 percent

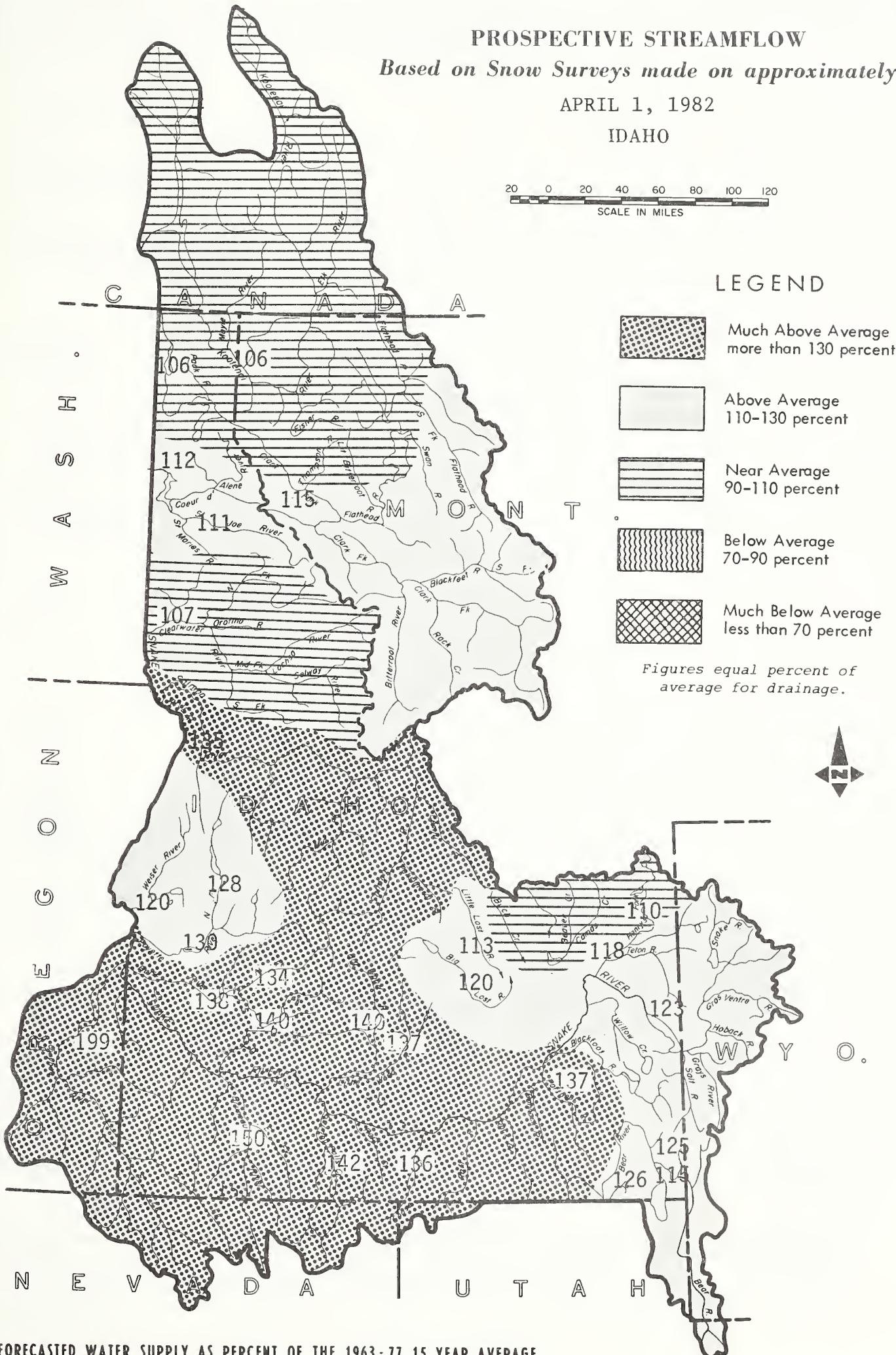


Below Average
70-90 percent



Much Below Average
less than 70 percent

Figures equal percent of average for drainage



FORECASTED WATER SUPPLY AS PERCENT OF THE 1963-77 15 YEAR AVERAGE

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST C		FORECAST PERIOD	THOUSAND ACRE FEET	Average +
	Thousand Acre Feet	Percent of Average	Last Year		
<u>Bruneau River</u>					
Hot Springs	(nr)	375	150	Mar-Sep	--
					251
<u>Little Lost River</u>					
Howe	(nr)	51	113	Apr-Sep	--
Wet Creek	(bl)	46.5	113	Apr-Sep	--
		29.5	113	Apr-Jun	--
					41
					26
<u>Big Lost River</u>					
Howell Ranch	(at)	270	120	Apr-Sep	--
		181	119	Apr-Jun	--
					225
					154
Mackay 8/	(nr)	245	120	Apr-Sep	--
					204
<u>Big Wood River</u>					
Magic Reservoir		447	140	Apr-Sep	--
Inflow 9/		424	140	Apr-Jul	--
		468	141	Mar-Jul	--
					319
					303
					332
<u>Little Wood River</u>					
Carey	(nr)	148	138	Apr-Sep	--
		136	137	Apr-Jul	--
		119	137	Apr-Jun	--
					107
					99
					87
<u>Boise River</u>					
Twin Springs	(nr)	982	134	Apr-Sep	--
		904	134	Apr-Jul	--
					733
					676
Boise 10/	(nr)	2282	138	Apr-Sep	--
		2120	138	Apr-Jul	--
		1875	138	Apr-Jun	--
					1656
					1536
					1360
<u>South Fork</u>					
Anderson Dam 11/	(at)	871	140	Apr-Sep	--
		815	140	Apr-Jul	--
					622
					582
<u>Owyhee River</u>					
Gold Cr., Nev. 12/	(nr)	38	180	Apr-Jul	--
Owyhee, Nev. 12/	(nr)	118	162	Apr-Jul	--
Lake Owyhee		780	199	Apr-Sep	--
net inflow 13/		754	207	Apr-Jul	--
Rome	(at)	750	208	Apr-Jul	--
					392
					431
					361
<u>Payette River</u>					
Horseshoe Bend 14/	(nr)	2418	130	Apr-Sep	--
					1860
<u>North Fork</u>					
Cascade 15/	(at)	722	128	Apr-Sep	--
Banks 15/	(nr)	929	128	Apr-Sep	--
					564
					726

(e) Assuming normal meteorological conditions.

• 1963-1977 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD		
	FORECAST C		FORECAST PERIOD	THOUSAND ACRE FEET		Last Year
	Thousand Acre Feet	Percent of Average		Last Year	Average +	
<u>Weiser River</u> Weiser	(nr)	531	120	Apr-Sep	--	442
<u>Salmon River</u> Whitebird	(at)	9710	135	Apr-Sep	--	7196
<u>Clearwater River</u> Spalding	(at)	9240	107	Apr-Sep	--	8672
GREAT BASIN						
<u>BEAR RIVER</u> Harer	(at)	383	115	Apr-Sep	--	332
<u>Montpelier Creek</u> Montpelier	(nr)	15.5	125	Apr-Sep	--	12.4
<u>Cub River</u> Preston	(nr)	63 59	126 126	Apr-Sep Apr-Jul	-- --	50 47

- 1/ Observed flow corrected for storage in Priest Lake.
 2/ Observed flow corrected for storage in Coeur d'Alene Lake.
 3/ Corrected for storage in Jackson Lake.
 4/ Corrected for storage in Jackson Lake and Palisades.
 5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot.
 6/ Corrected for storage in Henry's Lake and Island Park Reservoir.
 7/ Corrected for storage in Henry's Lake, Island Park, Grassy Lake and diversions between Ashton and Rexburg.
 8/ Observed flow corrected for storage in Mackay Reservoir.
 9/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine.
 10/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak.
 11/ Corrected for storage in Anderson Ranch Reservoir.
 12/ Corrected for storage in Wildhorse Reservoir.
 13/ From Bureau of Reclamation records of inflow.
 14/ Corrected for storage in Cascade and Deadwood Reservoirs.
 15/ Corrected for storage in Cascade Reservoir.
 Cooperative forecasts released by Soil Conservation Service and National Weather Service.

SNOW

DRAINAGE BASIN and or SNOW COURSE		THIS YEAR			PAST RECORD		
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average	
Above Burke	Coeur d'Alene	4100	3/30	53	21.4	8.4	24.7*
Above Gilmore	Lemhi	8320	4/2	56	14.2	8.9	10.6
Above Roland	St. Joe	4350	4/1	83	35.8	13.6	35.2*
Allen Ranch	Blackfoot	6470	3/30	40	13.3	--	--
Antelope Ridge	Owyhee	6180	3/30	23	10.4	0.0	6.2
Aspen Grove	Willow	6500	3/30	57	17.4	9.1	12.1*
Aspen Hall Pass (A)	Lemhi	8200	4/2	58	13.8	8.0	10.6*
Atlanta Summit	Boise	7600	4/5	146	50.1	22.0	36.2
Atlanta Townsite	Boise	5280	4/2	41	14.2	2.7	--
Austin Brothers Ranch	Blackfoot	6400	3/30	35	11.2	0.0	8.9
Bad Bear	Boise	4940	3/31	48	15.9	4.0	13.9
Badger Gulch	Trapper	6660	5/4	50	18.2	7.2	13.1
Banner Summit	Payette	7040	4/2	113	38.7	22.2	--
Battle Creek (A)	Owyhee	5710			0.0		1.7
Beagle Springs	(Mt) Beaverhead	8850	3/27	46	12.5	9.8	--
Bear Basin	Little Salmon	5350	3/29	59	20.1	11.8	--
Bear Canyon	Big Lost	7900	4/5	99	26.7	16.8	19.9
Bear Creek	(Nv) Jarbridge	8040	4/5	85	31.5	13.9	21.3
Bear Mountain	Clark Fork	5400	3/25	168	75.1	41.9	64.2*
Bear Saddle	Mann Creek	6180	3/27	73	28.8	18.5	--
Beaverdam Creek	Portneuf	6120	3/29	36	12.6	4.3	--
Below Roland	St. Joe	3920	4/1	34	14.1	0.0	--
Bennett Mountain	Canyon Creek	6560	3/27	59	21.1	11.1	17.5
Benton Meadow	Priest	2370	3/29	0	0.0	0.0	5.0
Benton Spring	Priest	4920	3/29	52	18.9	9.5	20.2
Big Creek Summit	Salmon	6580	3/27	123	51.5	23.8	37.5
Big Springs	Henrys Fork	6400	3/28	67	24.0	12.9	22.0
Birch Creek	Willow	6800	3/30	44	15.9	6.9	11.4*
Black Bear	(Mt) Madison	7950	3/30	147	57.4	27.2	44.1
Black Canyon	Henrys Fork	7960			24.4		35.4*
Black Moose	Henrys Fork	8160			25.2		40.3*
Blue Ledge Mine	W. Camas	6900	3/29	55	16.7	11.0	17.8
Blue Ridge	Blackfoot	6780	3/30	71	28.0	12.6	--
Bogus Basin	Payette	6340	3/31	84	29.8	14.3	24.5
Bogus Basin Road	Boise	5540	3/31	18	4.9	0.7	2.2
Bone	Willow	6200	3/29	22	7.0	0.0	7.2*
Borah (A)	Pahsimeroi	8250	4/2	37	9.8	4.7	--
Bostetter Ranger Sta.	Trapper	7500	4/3	74	28.1	12.5	20.2
Boulder Creek	Weiser	5440	3/31	75	25.4	11.6	25.1
Boy Scout Camp	Raft	7740	4/3	63	20.7	13.4	15.8
Breezy Saddle	Clearwater	5010	4/2	86	30.4	15.4	--
Brockman Station	Willow	6430	3/29	35	8.3	0.0	--
Brundage Mountain	Little Salmon	7560	3/29	136	57.8	34.0	48.6*
Buck Meadows	Selway	5650	4/1	97	39.5	14.5	31.2*
Bull Basin (A)	Owyhee	5480			0.0		0.4
Camas Creek Divide	Big Wood	5710	3/27	41	17.5	0.0	8.8*
Camp Creek	Beaver	5780	3/29	51	11.5	9.6	12.0
Cayuse Airstrip	Clearwater	3500	4/2	27	8.8	0.0	9.8
Cedar Creek	Cedar	6820	4/5	39	12.6	4.0	10.0
Chilco Ridge	Hayden	3650	3/29	0	0.0	0.0	--
Chimney Creek	Big Wood	6400	3/27	49	18.8	6.8	--
Christensen Ranch	Mink	5560	3/25	26	10.9	4.1	7.6
Clear Creek Meadows	Raft	9420	4/3	112	36.0	18.1	23.6
Cliff Canyon	Malad	7200	3/25	43	14.6	4.3	--
Cold Springs	Portneuf	7000	4/4	82	29.0	--	--
Conie Ridge	Hayden	3900	3/29	6	2.0	0.0	--
Coolwater Mountain	Lochsa	6040	4/2	136	44.2	18.9	33.0
Copes Camp	Lemhi	7520	4/2	48	12.6	5.8	8.8
Copper Basin	Big Lost	7640	4/5	51	12.6	8.9	10.9
Copper Ridge	Coeur d'Alene	4820	3/30	62	26.6	3.6	29.7
Corner Creek	Hayden	3150	3/29	0	0.0	0.0	--
Couch Summit	Boise	6840	3/27	61	20.5	13.0	18.7
Cozy Cove	Deadwood	5380	4/2	58	17.5	8.3	16.6
Crab Creek	Camas-Beaver	6860	3/29	52	15.2	--	--
Crater Meadows	Clearwater	5960	4/2	127	45.0	21.9	46.3
Crawford Ranger Sta.	Payette	4860	3/27	14	6.5	0.0	6.1
Crooked Fork	Lochsa	3610	3/30	35	13.4	0.0	14.1*
Cub River Ranger Sta.	Cub	5450	3/25	24	10.2	3.2	6.9
Daniels Creek	Malad	6270	3/25	27	9.8	2.0	--
Darby Canyon	(Wy) Teton	8250	3/31	88	32.1	14.9	24.0*
Deadline	Salmon Falls	7400	4/5	69	28.7	12.3	22.3
Deadline South	Salmon Falls	7450	4/5	77	29.5	--	--
Deadman Gulch	Boise	5600	3/28	54	20.2	8.2	16.8*

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE		Elevation	THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
Name & Drainage							Average
Deadwood Airstrip	Deadwood	5360	4/2	58	18.4	10.6	15.6
Deadwood Summit	Deadwood	6860	4/2	165	61.5	35.3	47.5
Dempsey Creek	Portneuf	6100	3/29	52	18.0	9.2	13.0
Dollarhide Summit	Big Wood	8420	4/5	121	38.9	18.5	25.1
Double Springs Pass (A)	Pahsimeroi	8380	4/2	48	13.2	7.9	11.1*
Dry Basin	Mink	7820	3/25	104	38.5	17.0	30.2
Dry Creek Flat	Malad	6360	3/25	22	9.3	0.9	5.3
Dry Fork	Big Lost	7220	3/29	65	19.7	12.4	16.9*
East Creek	Portneuf	7000	3/29	56	19.0	6.7	--
East Twin	Palouse	4130	3/29	27	11.4	0.6	9.8
Elk Butte	Clearwater	5550	4/2	102	35.4	16.1	38.8
Emigrant Summit	Bear	7390	3/31	103	36.7	12.6	26.0
Emigration Canyon	Bear	6500	3/31	48	16.4	5.4	11.1
Fairview Guard Sta.	Little Lost	6750	3/30	22	6.6	0.0	3.2
Fish Lake Airstrip	Lochsa	5650	4/2	120	40.8	19.4	41.2
Fishpole Lake	Big Lost	9300	4/5	115	32.1	22.7	21.1*
Forty-nine Meadows	Clearwater	4830	4/2	79	28.6	16.2	32.5
Fourth of July Summit	Coeur d'Alene	3200	3/31	11	3.2	0.0	8.8
Fox Creek (Nv)	Jarbridge	6750	4/5	42	14.7	3.9	9.9*
Franklin Basin	Cub	8040	3/25	94	35.3	14.4	28.2
Freds Mountain (Wy)	Teton	8150	3/29	91	32.3	15.3	20.7*
Galena	Big Wood	7440	3/29	75	23.3	15.0	19.5
Galena Snotel	Big Wood	7470	3/29	78	25.6	--	--
Galena Summit	Big Wood	8780	3/29	94	32.3	19.0	25.2
Garfield Ranger Sta.	Little Wood	6560	4/5	54	14.5	6.4	10.2
George Creek (Ut)	Raft	8840	4/3	106	34.5	15.5	--
George's Peak (Ut)	Raft	9000	4/3	116	44.0	--	--
Gibbons Pass (Mt)	Bitterroot	7100	3/25	84	30.9	17.8	24.8
Giveout	Montpelier	6860	3/29	56	19.0	4.8	13.0
Goat Creek (Nv)	Salmon Falls	8880	4/5	83	29.0	11.4	18.6
Goat Lake	Clearwater	6500	4/2	139	47.8	25.8	49.3
Graham Guard Sta.	Boise	5690	4/2	57	19.8	7.1	--
Graham Ranch	Big Wood	6270	3/29	54	16.6	12.2	14.4
Granite Peak	St. Joe	6000	4/2	140	44.2	22.1	46.8
Grassy Lake (Wy)	Henrys Fork	7265	3/29	122	48.3	22.7	36.6
Halverson Creek	Kootenai	4850	3/25	139	60.8	36.4	44.2*
Hall Creek	Lemhi	7560	4/2	36	8.4	4.8	5.9*
Hemlock Butte	Clearwater	5810	4/2	153	52.2	23.8	51.3
Hilts Creek	Little Lost	8000	Unavailable		11.0	--	--
Hoodoo Basin (Mt)	Clark Fork	6000	3/29	148	65.0	34.4	53.6*
Hoodoo Creek (Mt)	Clark Fork	5900	3/29	139	58.5	28.5	49.9
Horseshoe Basin	Bear	8000	3/25	94	35.7	17.3	25.6
Howell Canyon	Marsh Creek	7980	4/3	96	38.2	12.7	26.1
Humboldt Gulch	Coeur d'Alene	4250	3/30	42	15.0	--	--
Hummingbird Spgs. (Nv)	Jarbridge	8870	4/5	106	37.1	14.3	23.7
Hyde Pasture (A)	Jordan-Owyhee	5760	Unavailable		0.0	3.2	--
Hyndman Creek	Big Wood	7440	4/5	82	22.1	12.8	--
Idaho City	Boise	4000	3/31	13	3.1	--	--
Indian Grove	Raft	7560	4/3	48	15.7	7.4	--
Indian Meadows	Teton	8240	Unavailable		--	37.4*	--
Iron Bog	Big Lost	7650	3/29	50	13.2	11.0	14.1
Iron Mine Creek	Fish Creek	6300	4/5	60	15.9	8.8	10.5
Irving Creek	Medicine Lodge	7035	4/2	49	9.5	5.7	5.7*
Island Park	Henry's Fork	6290	3/28	56	20.4	10.7	17.2
Jackpine Creek (Wy)	Teton	7350	3/31	80	29.6	11.9	23.0*
Jackson Peak	Boise	7070	4/2	112	38.8	21.7	33.1
Johnson Creek	Blackfoot	6730	3/31	52	16.8	8.4	--
Johnson Pond	Owyhee	6700	Unavailable		--	--	--
Kellogg Peak	Coeur d'Alene	5560	4/1	92	36.2	13.6	35.4
Kilgore	Camas Creek	6320	3/29	40	13.2	7.1	11.5
Kit Carson Pasture	Selway	4950	3/27	31	13.1	2.4	9.1
Kruze Meadow	Clearwater	4780	4/1	41	14.6	0.0	--
Lake Fork	Payette	5290	3/27	46	16.6	8.8	16.9
Langford Flat Creek	Salmon Falls	5980	4/5	16	6.2	--	--
Latham Springs	Henry's Fork	7630	Unavailable		23.8	34.8	--
Lava Creek	Willow	7350	3/29	66	23.8	8.8	--
Leadbelly	Big Lost	6700	3/29	26	9.2	8.6	9.4
Leatherman Pass (A)	Pahsimeroi	9860	4/2	85	27.4	19.9	26.1*
Lemhi Pass (Mt)	Beaverhead	7480	3/28	33	10.4	7.0	9.9
Lemhi Ridge (Mt)	Beaverhead	8100	3/28	42	12.8	8.9	10.9*
Liberty Spring	Mink	8600	3/25	146	57.6	17.8	39.8
Little Beaver	Montpelier	6970	3/29	62	22.3	6.6	16.3

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE		Name & Drainage	Elevation	THIS YEAR			PAST RECORD	
				Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average
Little Camas Flat	Boise	4940	3/27	19	8.8	0.0	4.0	
Logger Springs	Raft	8120	4/3	74	24.2	12.9	--	
Lolo Pass	Lochsa	5240	3/30	84	34.3	14.1	32.6	
Lookout	Coeur d'Alene	5140	3/30	97	37.6	17.4	37.1	
Lost Garfield	Little Lost	6600	3/30	19	6.7	0.0	3.0	
Lost Lake	Clearwater	6110	4/2	167	57.5	34.3	61.8*	
Lost-Wood Divide	Big Lost	7900	4/5	104	33.8	18.3	24.8	
Lower Elkhorn	Portneuf	6960	3/25	56	21.8	6.9	14.0*	
Lower Home Canyon	Montpelier	7640	3/31	58	19.0	6.5	14.9*	
Lower Pebble	Portneuf	5780	3/29	53	20.4	5.4	13.3*	
Lower Sands Creek	Coeur d'Alene	3120	3/30	43	16.4	4.2	21.9	
Lucky Dog	Henrys Fork	6860				17.6	26.0	
Magic Mountain	Rock Creek	6880	4/5	69	25.9	11.9	19.2	
Mann Creek	Weiser	6080	3/27	76	29.6	18.8	27.7*	
Mascot Mine	Big Wood	7780	4/5	87	24.1	13.2	15.5	
McRenolds Reservoir	Teton	6720	3/31	66	22.8	11.3	20.7*	
Meadow Lake	Lemhi	9150	4/2	90	28.0	15.3	20.8	
Mill Creek Summit	Salmon	8800	4/4	105	33.8	14.3	24.1	
Mink Creek	Portneuf	6410	3/31	76	29.1	12.4	18.3	
Montpelier Creek	Montepllier	6540	3/29	33	9.3	0.0	8.4	
Moonshine	Little Lost	7440	3/30	44	12.2	6.8	11.2	
Moores Creek Summit	Boise	6100	3/31	108	40.8	17.6	33.6	
Moose Creek	N. F. Salmon	6200	4/1	63	22.0	10.8	17.1	
Morgan Creek	Salmon	7600	4/1	63	18.9	9.0	14.9	
Morse Creek Sawmill	Salmon	7120	4/2	42	11.0	8.1	9.5	
Moscow Mountain	Palouse	4410	3/29	50	19.6	4.3	18.0	
Mosquito Ridge	Coeur d'Alene	5200	4/1	109	41.8	25.6	40.2	
Mountain Meadows	Selway	6360	4/2	83	25.1	11.2	26.1*	
Mount Baldy	Big Wood	8920	3/31	101	31.6	16.9	21.4	
Mud Creek	Willow	7100	3/30	81	28.5	12.1	--	
Mud Flat	Owyhee	5730	3/30	19	8.4	0.0	4.9	
Muldoon	Little Wood	6320	4/5	35	9.3	1.1	7.1	
Nez Perce Pass	(Mt) Bitterroot	6570	3/27	62	24.1	8.8	--	
North Putnam	Ross Fork	7240	4/5	102	41.0	--	--	
One Mile Summit	Raft	7330	4/3	33	9.2	5.3	7.6	
Oxford Mountain	Malad	6800	3/25	41	14.1	5.1	9.5	
Oxford Spring	Malad	6740	3/25	45	16.9	--	--	
Packsaddle Spring	Teton	8200		Unavailable		16.8	--	
Pebble Creek	Portneuf	6400	3/29	54	20.5	6.9	16.7	
Perreau Meadows	Salmon	8500	3/31	62	21.7	11.2	--	
Phillips Bench	(Wy) Teton	8200	3/29	110	40.8	15.6	30.6*	
Pierce Ranger Sta.	Clearwater	3080	4/1	30	11.5	0.0	10.6	
Pine Creek Pass	Teton	6810	3/29	66	23.2	8.7	18.3	
Placer Creek	Weiser	5860	3/28	64	18.8	12.2	18.8	
Pole Creek Ranger Sta.	Jarbridge	8360	4/5	86	30.6	14.9	22.5	
Prairie	Boise	4800	3/28	10	4.6	0.0	3.4	
Putnam	Portneuf	7220	4/4	77	29.2	--	--	
Rammel Ridge	Teton	8240	3/31	132	51.7	22.3	--	
Red Canyon	Owyhee	6520				0.1	5.0	
Redfish Lake Flat	Salmon	6560	3/30	46	15.6	7.2	10.9*	
Road Creek	Boise	5380	4/2	41	13.0	2.4	9.2*	
Robinson Creek Ridge	Weiser	6220	3/27	44	19.0	15.8	21.3*	
Rock Flat Summit	Payette	5310	3/29	54	18.4	10.8	19.6	
Roland Summit	St. Joe	5120	4/1	106	46.4	13.0	40.1*	
Sage Creek Saddle	Hayden	4080	3/29	43	16.2	0.5	--	
Savage Pass	Lochsa	6170	3/30	92	34.3	17.6	28.6	
Sawmill Canyon	Little Lost	7000	3/30	37	8.8	6.8	8.1	
Sawtell Mountain	Henrys Fork	8720	3/29	160	48.8	26.0	35.1*	
Schwartz Lake	Lemhi	8540	4/2	68	20.3	9.0	13.8	
Schweitzer Basin	Pend Oreille	6090	4/1	150	61.0	--	--	
Schweitzer Bowl	Pend Oreille	4800	4/1	96	38.6	--	30.9*	
Schweitzer Ridge	Pend Oreille	6200	4/1	134	54.5	38.1	47.8*	
Secesh Summit	Payette	6520	3/26	112	46.8	22.4	37.2*	
Sedgwick Peak	Portneuf	7850	3/29	76	26.3	11.1	--	
Seventy Six Creek	Jarbridge-Bruneau	7100		Unavailable		6.8	11.4	
Shanghai Summit	Clearwater	4570	4/2	79	27.2	5.8	27.2	
Sheep Mountain	Willow	6570	3/29	52	18.3	6.2	13.9*	
Sherwin	St. Maries	3200	3/25	37	15.1	0.4	13.8	
Shoshone Basin	Salmon Falls	5810	4/5	14	5.0	1.5	5.1*	
Silver City	Jordan-Owyhee	6400	3/31	55	19.8	6.0	15.4	
Skitwish Ridge	Coeur d'Alene	5110	3/30	74	33.9	--	--	
Slug Creek Divide	Blackfoot	7230	3/29	64	22.3	9.0	18.0	

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

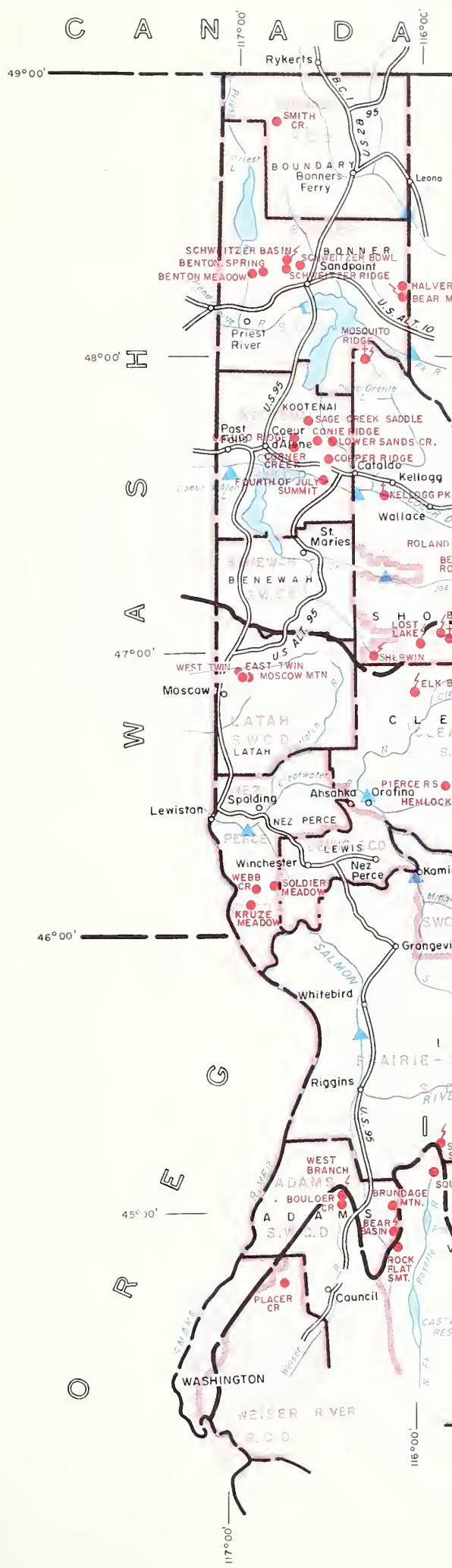
(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
Name & Drainage	Elevation					Average
Smith Creek	Kootenai	4800	3/31	127	52.8	34.2
Soldier Ranger Sta.	Big Wood	5740	3/27	35	11.9	0.0
Somsen Ranch	Willow Creek	6840	3/30	60	20.6	9.0
South Mountain	Jordan-Owyhee	6500	3/31	52	19.0	8.2
Squaw Flat	Weiser	6240	3/27	72	26.8	15.6
Squaw Meadow	Payette	5900	3/26	106	45.3	22.2
State Line	Teton	6660	3/29	50	17.4	7.7
Stickney Mill	Big Lost	7430	4/5	54	13.7	10.1
Strawberry Creek	Mink	5820	3/31	36	12.7	4.9
Strawberry Mink Divide	Mink	6720	3/25	73	28.8	10.0
Sturgill Ridge	Weiser	6680	3/27	89	34.4	21.4
Sublett	Raft	5950	4/3	45	16.3	5.6
Succor Creek	Jordan-Owyhee	6100			5.1	5.0
Sulphur Peak	Blackfoot	7070	3/31	58	19.9	8.6
Sunset	Coeur d'Alene	5540	4/1	100	37.0	17.0
Swede Peak	Little Wood	7640	4/5	95	26.0	13.0
Targhee Pass	Henry's Fork	6980	3/29	67	16.8	9.0
Telfer Ranch	Fish Creek	5840	4/5	32	10.3	0.0
Teton Pass W.S.	(WY) Teton	7740	3/30	93	34.7	15.6
Tex Creek	Willow	6650	3/29	44	13.6	7.6
Thorson Cabin	Weiser	5320	3/27	53	21.0	11.4
Toponce	Portneuf	6160	4/4	60	24.2	--
Trinity Mountain	Boise	7770	4/5	160	60.8	26.5
Tripod Summit	Payette	5260	3/28	56	20.9	10.1
Twin Peaks (A)	Salmon	9190	4/4	109	35.1	14.6
Upper Elkhorn	Portneuf	7140	3/25	78	27.1	11.4
Upper Home Canyon	Montpelier	8560	3/31	95	35.2	12.1
Valley View	Henry's Fork	6680	3/29	71	19.8	9.9
Vaught Ranch (A)	Owyhee	5830			0.0	1.7*
Vienna Mine	Salmon	8960	4/5	153	55.6	26.8
Vi Pont	Goose	7670	4/3	61	22.0	9.5
War Eagle	Jordan-Owyhee	7280			--	25.1*
Webb Creek	Clearwater	4720	4/1	40	14.4	0.0
Webber Creek	Medicine Lodge	6700	4/2	49	9.8	5.4
West Branch	Weiser	5560	3/31	87	29.8	17.5
West Twin	Palouse	4220	3/29	16	6.1	0.8
Wet Creek Summit	Little Lost	7680	3/31	58	15.3	9.3
Whiskey Flat	Montpelier	6960	3/29	45	15.3	1.8
White Elephant	Henry's Fork	7710	3/29	113	34.4	18.5
Wildhorse Divide	Portneuf	6490	3/31	67	25.8	--
Williams Creek Summit	Salmon	7990	3/31	54	16.7	8.0
Willow Flat	Cub	6070	3/25	46	19.3	6.6
Wilson Creek	(NV) Salmon Falls	7500	4/5	55	19.7	4.2
Wood Canyon Divide	Blackfoot	7450	3/31	71	24.8	9.7
Worm Creek	Cub	6620	3/25	59	23.0	11.6

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.
 (A) Aerial observation Water content estimated.

UPPER COLUMBIA and LOWER SNAKE RIVER BASIN

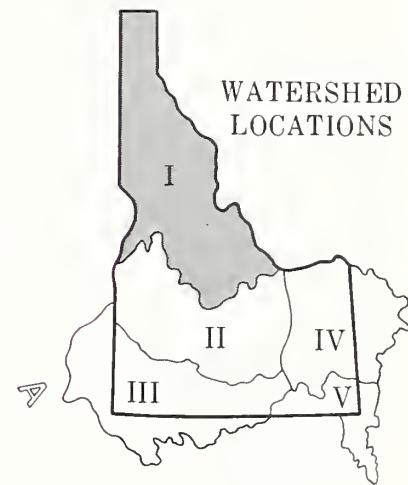


25 0 25 50 75
SCALE IN MILES

LEGEND

- Watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- SNOTEL Site
- † Aerial Snow Depth Gage

WATERSHED LOCATIONS



INDEX to SNOW COURSES

UPPER COLUMBIA BASIN

LOWER SNAKE BASIN

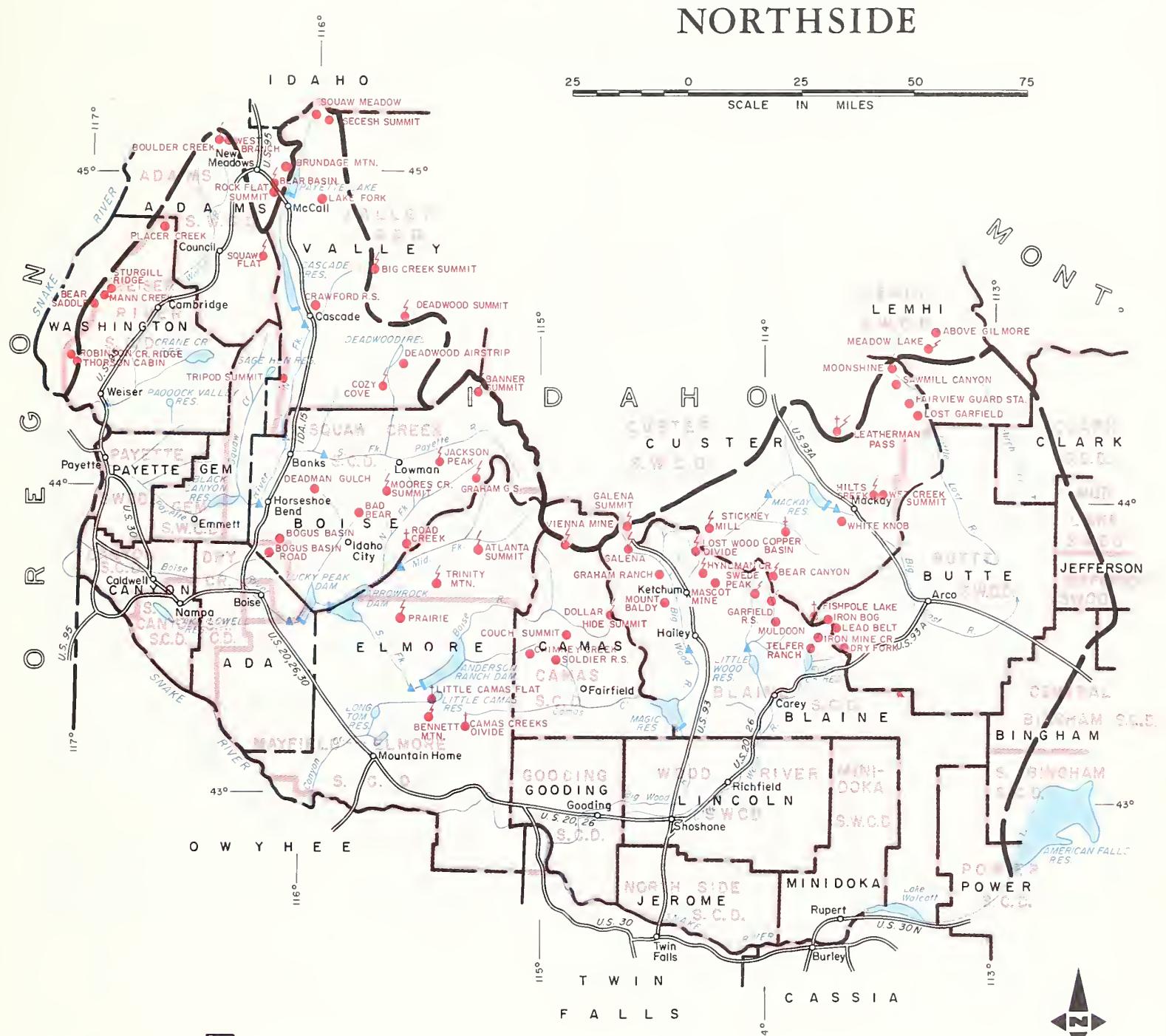
No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev	No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev							
KOOTENAI RIVER																				
16A7	I	Halverson Creek	3	57N	3E	4850	16C3	I	East Twin	13	40N	5W	4130							
16A1	I	Smith Creek	29	64N	3W	4800	16C2	I	Moscow Mountain	18	40N	4W	4410							
PEND OREILLE-PRIEST RIVER																				
16A8S	I	Bear Mountain	9	57N	3E	5400	16C4	I	West Twin	14	40N	5W	4220							
16A2	I	Benton Meadow	27	58N	4W	2370	PALOUSE RIVER													
16A3	I	Benton Spring	30	58N	3W	4920	15B20SR	I	Breezy Saddle	1	43N	4E	5010							
16A10S	I	Schweitzer Basin	18	58N	2W	6090	15D5	I	Buck Meadows	27	31N	8E	5650							
16A6	I	Schweitzer Bowl	20	58N	2W	4800	15C3S	I	Cayuse Airstrip	4	38N	11E	3500							
16A5	I	Schweitzer Ridge	19	58N	2W	6200	15C7S	I	Coolwater Mountain	31	33N	8E	6040							
HAYDEN CREEK																				
16B8	I	Chilco Ridge	15	52N	2W	3650	15C9A	I	Crater Meadows	11	37N	9E	5960							
16B7	I	Conie Ridge	22	52N	2W	3900	14C11	I	Crooked Fork	27	37N	14E	3610							
16B9	I	Corner Creek	22	52N	2W	3150	16C15	I	Elk Butte	6	40N	3E	5550							
16B6	I	Sage Creek Saddle	10	52N	2W	4080	15C2A	I	Fish Lake Airstrip	34	35N	11E	5650							
SPOKANE RIVER																				
15B8	I	Above Burke	11	48N	5E	4100	15B3A	I	Forty-nine Meadows	6	43N	5E	4830							
15B7	I	Above Roland	35	47N	6E	4350	14C9A	I	Goat Lake	4	38N	13E	6500							
15B6	I	Below Roland	35	47N	6E	3920	16C6SR	I	Hemlock Butte	7	36N	7E	5810							
16B2	I	Copper Ridge	6	50N	1W	4820	15C1OS	M	Hoodoo Basin	17	14N	27W	6000							
16B3	I	Fourth of July Summit	6	49N	1W	3200	15C1	M	Hoodoo Creek	16	14N	27W	5900							
15B13A	I	Granite Peak	4	42N	8E	6000	14D3	I	Kit Carson Pasture	4	27N	15E	4950							
16B5A	I	Kellogg Peak	19	48N	3E	5560	16C17	I	Kruze Meadows	11	32N	4W	4780							
15B2S	I	Lookout	4	47N	6E	5140	14C5S	I	Lolo Pass	16	38N	15E	5240							
16B1	I	Lower Sands Creek	32	51N	1W	3120	15B14S	I	Lost Lake	9	43N	4E	6110							
16A4AS	I	Mosquito Ridge	5	54N	2E	5200	15D6S	I	Mountain Meadows	9	27N	10E	6360							
15B5A	I	Roland Summit	26	47N	6E	5120	14D1	M	Nez Perce Pass	25	1S	24W	6570							
16C1S	I	Sherwin	28	42N	1E	3200	15C5	I	Pierce Ranger Station	2	36N	5E	3080							
15B9AS	I	Sunset	33	49N	5E	5540	14C4	I	Savage Pass	18	36N	15E	6170							
CLEARWATER RIVER																				
13E19	I	Above Gilmore	13	13N	26E	8240	15C4S	I	Shanghai Summit	7	37N	6E	4600							
13E21A	I	Aspen-Hall Pass	6	16N	28E	8200	16C18	I	Soldier Meadows	33	33N	3W	4650							
16E11S	I	Bear Basin	30	19N	3E	5350	16C19	I	Webb Creek	36	33N	3½W	4720							
15E2S	I	Big Creek Summit	24	15N	5E	6580	SALMON RIVER													
13E8A	I	Borah	21	10N	23E	8250	13E19	I	Above Gilmore	13	13N	26E	8240							
16D6	I	Brundage Mountain	6	19N	3E	7560	13E21A	I	Aspen-Hall Pass	6	16N	28E	8200							
13E17	I	Copes Camp	36	18N	22E	7520	16E11S	I	Bear Basin	30	19N	3E	5350							
13E25A	I	Double Springs Pass	3	10N	22E	8400	15E2S	I	Big Creek Summit	24	15N	5E	6580							
13D2	M	Gibbons Pass	4	2S	19W	7100	13E8A	I	Borah	21	10N	23E	8250							
13E20	I	Hall Creek	1	16N	27E	7560	16D6	I	Brundage Mountain	6	19N	3E	7560							
13E24A	I	Leatherman Pass	20	9N	23E	9860	13E17	I	Copes Camp	36	18N	22E	7520							
13E1	M	Lemhi Pass	9	10S	15W	7480	13E25A	I	Double Springs Pass	3	10N	22E	8400							
13E23S	M	Lemhi Ridge	4	10S	15W	8100	13D2	M	Gibbons Pass	4	2S	19W	7100							
13E18S	I	Meadow Lake	26	13N	26E	9150	13E20	I	Hall Creek	1	16N	27E	7560							
14E1S	I	Mill Creek Summit	8	13N	17E	8800	13E24A	I	Leatherman Pass	20	9N	23E	9860							
13D16S	I	Moose Creek	14	27N	21E	6200	13E1	M	Lemhi Pass	9	10S	15W	7480							
14E4S	I	Morgan Creek	31	18N	19E	7600	13E23S	M	Lemhi Ridge	4	10S	15W	8100							
13E26	I	Morse Creek Sawmill	8	15N	23E	7120	13E18S	I	Meadow Lake	26	13N	26E	9150							
14D5	I	Perreau Meadows	23	21N	20E	8500	14E1S	I	Mill Creek Summit	8	13N	17E	8800							
14E7	I	Redfish Lake Flat	35	10N	13E	6560	13D16S	I	Moose Creek	14	27N	21E	6200							
13E16	I	Schwartz Lake	34	18N	22E	8540	14E4S	I	Morgan Creek	31	18N	19E	7600							
14E3A	I	Twin Peaks	28	15N	17E	9190	13E26	I	Morse Creek Sawmill	8	15N	23E	7120							
14F4S	I	Vienna Mine	1	5N	13E	8960	14D5	I	Perreau Meadows	23	21N	20E	8500							
14D4	I	Williams Creek Summit	34	21N	20E	7990	14E7	I	Redfish Lake Flat	35	10N	13E	6560							

LEGEND

Numbering System (example)

- 10J7 Snow course only
- 10J7A Snow course and/or aerial marker
- 10J7S Snow course and snotel site
- 10J7R Radioactive gage

MIDDLE SNAKE RIVER BASIN NORTHSIDE



WATERSHED LOCATIONS

LEGEND

- A legend listing six map symbols and their meanings:

 - Watershed Boundary**: Represented by a thick black line.
 - Soil Conservation District Bdry**: Represented by a thick red line.
 - County Boundary**: Represented by a thin black line.
 - Forecast Point**: Represented by a blue triangle.
 - Snow Course**: Represented by a red circle.
 - Snow Course and SNOTEL Site**: Represented by a red circle with a lightning bolt symbol.
 - Aerial Snow Depth Gage**: Represented by a red triangle.

INDEX to SNOW COURSES

MIDDLE SNAKE RIVER BASIN NORTHSIDE

No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev		No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev							
LITTLE LOST RIVER																					
13E5	I	Fairview Guard Station	27	12N	26E	6750		14F10	I	Couch Summit	9	2N	14E	6840							
13E10S	I	Hilts Creek	15	8N	25E	8000		16F1	I	Deadman Gulch	29	7N	4E	5600							
13E3	I	Lost-Garfield	3	11N	26E	6600		15F14SR	I	Graham Guard Station	9	7N	10E	5690							
13E6S	I	Moonshine	31	13N	26E	7440		15E9S	I	Jackson Peak	7	8N	9E	7070							
13E4	I	Sawmill Canyon	17	12N	26E	7000		15F1SR	I	Moores Creek Summit	19	7N	7E	6100							
13E7	I	Wet Creek Summit	15	8N	25E	7680		15F6S	I	Prairie	13	2N	7E	4800							
BIG LOST RIVER																					
13F3S	I	Bear Canyon	22	5N	21E	7900		BOISE RIVER (cont.)													
13F2	I	Copper Basin	26	6N	21E	7640		14F10	I	Couch Summit	9	2N	14E	6840							
13F20	I	Dry Fork	23	3N	23E	7220		16F1	I	Deadman Gulch	29	7N	4E	5600							
13F8	I	Fishpole Lake	28	4N	22E	9300		15F14SR	I	Graham Guard Station	9	7N	10E	5690							
13F11	I	Iron Bog	23	4N	22E	7650		15E9S	I	Jackson Peak	7	8N	9E	7070							
13F12	I	Leadbelt	34	4N	23E	6700		15F1SR	I	Moores Creek Summit	19	7N	7E	6100							
14F3S	I	Lost Wood Divide	25	6N	18E	7900		15F6S	I	Prairie	13	2N	7E	4800							
14F2S	I	Stickney Mill	9	6N	19E	7430		15F3	I	Road Creek	5	5N	8E	5380							
BIG WOOD RIVER																					
15F9	I	Camas Creeks Divide	11	2S	9E	5710		15F5SR	I	Trinity Mountain	6	3N	9E	7770							
15F15	I	Chimney Creek	9	1N	12E	6400		CANYON CREEK													
14F8S	I	Dollarhide Summit	9	3N	15E	8420		15F7S	I	Bennett Mountain	7	2S	9E	6560							
14F1	I	Galena	4	6N	15E	7440		15F12	I	Little Camas Flat	21	1S	9E	4940							
14F6S	I	Galena Snotel	4	6N	15E	7470		PAYETTE RIVER													
14F12S	I	Galena Summit	7	6N	15E	8780		15E11S	I	Banner Summit	11	11N	10E	7040							
14F5	I	Graham Ranch	10	5N	17E	6270		16F2	I	Bogus Basin	16	5N	3E	6340							
14F16S	I	Hyndman Creek	2	4N	19E	7440		15E8SR	I	Cozy Cove	17	11N	7E	5380							
14F7	I	Mascot Mine	8	4N	20E	7780		15E3	I	Crawford Ranger Station	21	14N	4E	4860							
14F9	I	Mount Baldy	23	4N	17E	8920		15E10	I	Deadwood Airstrip	8	11N	7E	5360							
14F11	I	Soldier Ranger Station	29	2N	14E	5740		16E4S	I	Deadwood Summit	13	14N	7E	6860							
LITTLE WOOD RIVER																					
13F4S	I	Garfield Ranger Station	11	3N	21E	6560		15E1	I	Lake Fork	3	18N	4E	5290							
13F5	I	Muldoon	26	3N	21E	6320		16E1	I	Rock Flat Summit	1	18N	2E	5310							
13F9RS	I	Swede Peak	4	3N	21E	7640		15D1S	I	Secesh Summit	4	21N	4E	6520							
FISH CREEK																					
13F10	I	Iron Mine Creek	33	3N	23E	6300		15D2	I	Squaw Meadow	17	21N	4E	5900							
13F6	I	Telfer Ranch	7	2N	23E	5840		16E3	I	Tripod Summit	17	11N	3E	5260							
BOISE RIVER																					
15F4S	I	Atlanta Summit	23	5N	10E	7580		16D1	I	Boulder Creek	16	20N	1W	5440							
15F2	I	Bad Bear	35	7N	6E	4940		16E2	I	Placer Creek	15	17N	3W	5860							
16F4	I	Bogus Basin Road	32	5N	3E	5540		16E5S	I	Squaw Flat	32	17N	2E	6240							
								16D8S	I	West Branch	15	20N	1W	5560							
MANN CREEK																					
								6E10S	I	Bear Saddle	29	15N	5W	6180							
								16E9	I	Mann Creek	20	15N	5W	6080							
								17E1	I	Robinson Creek Ridge	2	14N	6W	6220							
								16E8	I	Sturgill Ridge	28	15N	5W	6680							
								17E2	I	Thorson Cabin	12	14N	6W	5320							

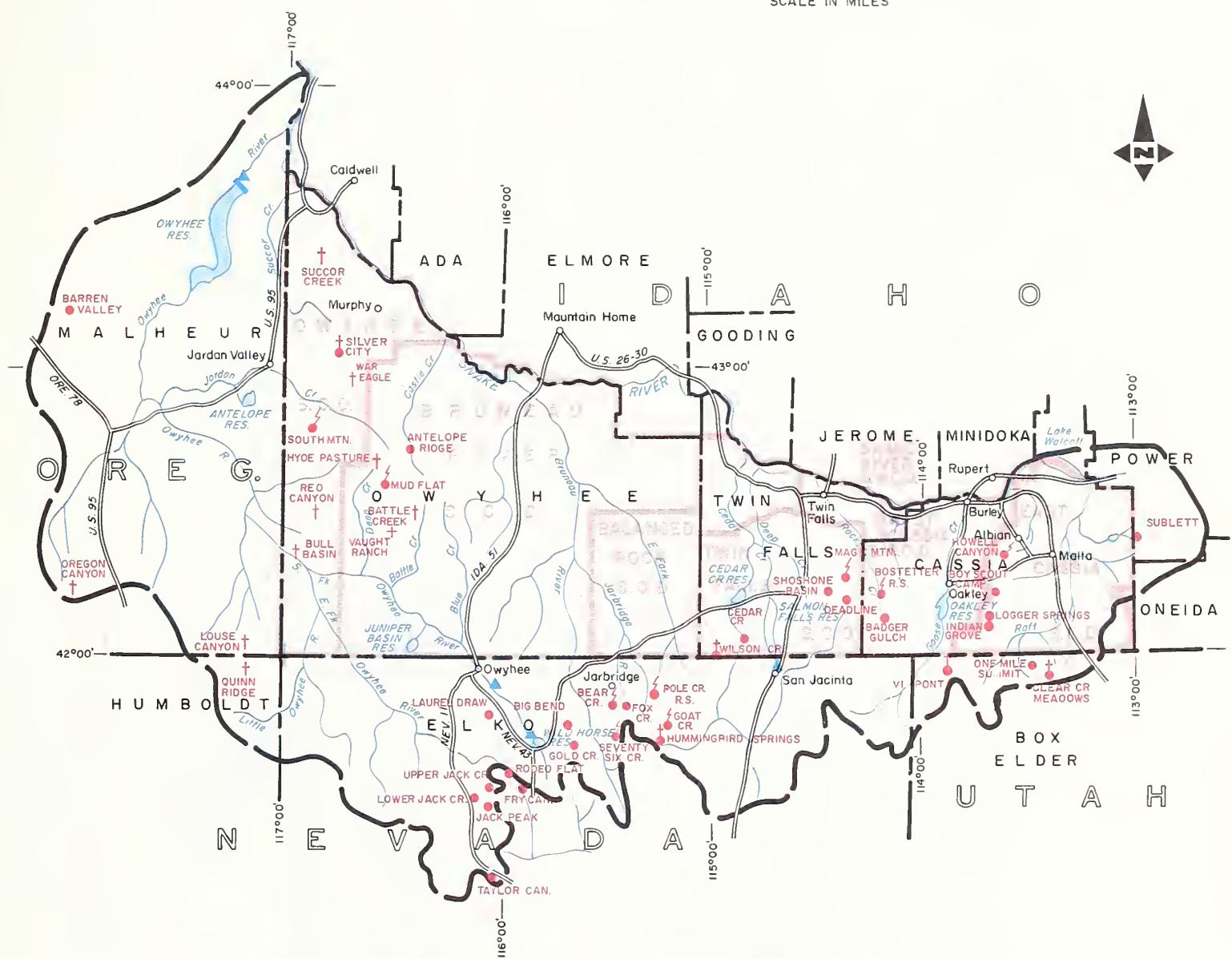
LEGEND

Numbering System (example)

- 10J7 Snow course only
- 10J7A Snow course and/or aerial marker
- 10J7S Snow course and snotel site
- 10J7R Radioactive gage

MIDDLE SNAKE RIVER BASIN SOUTHSIDE

25 0 25 50 75
SCALE IN MILES



LEGEND

- Watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Snow Course and SNOTEL Site
- Aerial Snow Depth Gage
- Aerial Snow Depth Gage



INDEX to SNOW COURSES

MIDDLE SNAKE RIVER BASIN SOUTHSIDE

No.	State	Name	Sec.	Twp.	Rge.	
			Lat.	or And	Long.	Elevation
RAFT RIVER						
13G2	I	Boy Scout Camp	8	14S	24E	7740
13H2	U	Clear Creek Meadows	26	14N	14W	9420
13G1S	I	Howell Canyon	2	13S	24E	7980
13G4	I	Indian Grove	14	15S	23E	7560
13G3	J	Logger Springs	2	15S	23E	8120
13H1	U	One Mile Summit	17	14N	14W	7330
12G8	I	Sublett	17	12S	30E	5950
GOOSE - TRAPPER CREEK						
14G3	I	Badger Gulch	24	15S	19E	6660
14G1S	I	Bostetter Ranger Station	35	14S	19E	7500
13H3A	U	Vi Pont	17	14N	17W	7670
SALMON FALLS CREEK						
14G5	I	Cedar Creek	26	15S	13E	6800
14G4	I	Deadline	25	14S	18E	6900
15H13S	N	Goat Creek	31	46N	60E	8880
14G2S	I	Magic Mountain	25	14S	18E	6880
14G6	I	Shoshone Basin	24	14S	17E	5810
15G2	I	Wilson Creek	24	16S	12E	7500
BRUNEAU RIVER						
15H1S	N	Bear Creek	31	46N	58E	8040
15H2	N	Fox Creek	33	46N	58E	6750
15H15	N	Hummingbird Springs	12	45N	59E	8870
15H14S	N	Pole Creek Ranger Station	13	46N	50E	8360
15H3S	N	Seventy-six Creek	6	44N	58E	7100
OWYHEE RIVER						
16G6	I	Antelope Ridge	35	8S	1W	6140
18F5	O	Barren Valley	26	17S	38E	4200
16G9A	I	Battle Creek	10	11S	1E	5720
15H4	N	Big Bend	30	45N	56E	6700
16G10A	I	Bull Basin	29	12S	5W	5460
15H7	N	Fry Canyon	31	43N	54E	6700
15H5	N	Gold Creek	31	45N	56E	6600
16G5A	I	Hyde Pasture	31	8S	2W	5760
16H4	N	Jacks Peak	28	42N	53E	8420
16H5	N	Laurel Draw	20	45N	53E	6700
17G4A	O	Louse Canyon	27	40S	44E	6440
16H1M	N	Lower Jack Creek	18	42N	53E	6800
16G7S	I	Mud Flat	34	9S	2W	5730
17G5A	O	Oregon Canyon	9	40S	40E	6950
17H6A	N	Quinn Ridge	9	47N	41E	6300
16G11A	I	Red Canyon	32	11S	4W	6650
15H6M	N	Rodeo Flat	36	43N	53E	6800
16F3	I	Silver City	7	5S	3W	6400
16G1S	I	South Mountain	35	7S	5W	6500
16F6A	I	Succor Creek	25	3S	5W	6100
15H9M	N	Taylor Canyon	35	39N	53E	6200
16H2	N	Upper Jack Creek	9	42N	53E	7250
16G12A	I	Vaught Ranch	10	11S	1W	5950
16G13A	I	War Eagle	20	5S	3W	7280

LEGEND

Numbering System (example)

- 10J7 Snow course only
- 10J7A Snow course and/or aerial marker
- 10J7S Snow course and snotel site
- 10J7R Radioactive gage

UPPER SNAKE RIVER BASIN

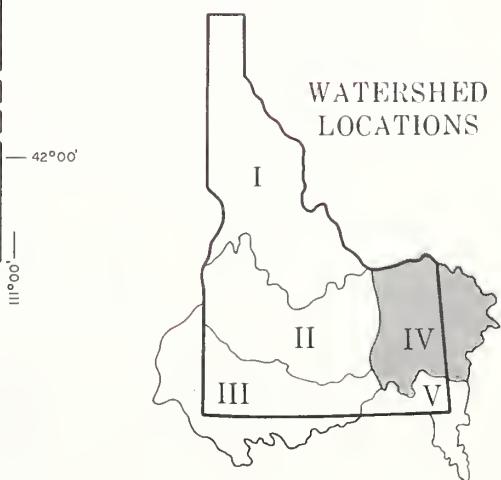


A horizontal scale bar with tick marks at 25, 0, 25, and 50. Below it is the label "SCALE IN MILES".



LEGEND

- Watershed Boundary
 - Soil Conservation District Bdry.
 - County Boundary
 - ▲ Forecast Point
 - Snow Course
 - ⚡ Snow Course and SNOTEL Site
 - † Aerial Snow Depth Gage



INDEX to SNOW COURSES

UPPER SNAKE RIVER BASIN

No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev	No.	State	Name	Sec. Lat.	Twp. or And	Rge. Long.	Elev						
SNAKE RIVER-WYOMING																			
10G4	Wy	Afton Ranger Station	30	32N	118W	6200	11E11	I	Blue Ledge Mine	21	13N	38E	6900						
10F1	Wy	Arizona	3	46N	115W	6850	12E3	I	Camp Creek	21	13N	36E	6580						
10E8	Wy	Aster Creek		44°17'		110°38'	7700	11E17S	I	Crab Creek	21	13N	38E	6860					
10F2S	Wy	Base Camp	20	46N	113W	6900	11E12	I	Kilgore	6	12N	39E	6200						
10F7S	Wy	Blackrock	4	44N	111W	8600	MEDICINE LODGE CREEK												
10G2S	Wy	Blind Bull	6	34N	115W	8750	12E4	I	Irving Creek	20	13N	33E	7035						
10F14	Wy	Bryan Flat	9	38N	115W	6250	12E5	I	Webber Creek	23	12N	32E	6700						
10G7	Wy	CCC Camp	9	29N	118W	7500	WILLOW CREEK												
10G5S	Wy	Cottonwood Lake	25	31N	118W	7500	11F10	I	Aspen Grove	36	2N	41E	6500						
10E10S	Wy	Coulter Creek		44°09'		110°33'	7600	11F3	I	Birch Creek	36	2N	41E	6800					
10F17	Wy	East Rim Divide	32	37N	111W	7950	11F8	I	Bone	29	1S	40E	6200						
10F6	Wy	Four Mile Meadows	35	45N	112W	7770	11F16	I	Brockman Station	19	2S	43E	6430						
10E13	Wy	Glade Creek	12	48N	116W	7200	11F15	I	Hell Creek	27	1S	42E	7350						
10F18	Wy	Greys Boundary	33	37N	118W	5800	11F14	I	Mud Creek	4	2S	39E	7100						
10F19S	Wy	Gros Ventre Summit	36	40N	111W	8750	11F11SR	I	Sheep Mountain	30	2S	41E	6570						
10G3	Wy	Grover Park Divide	27	33N	118W	7500	11F5SR	I	Tex Creek	36	1N	41E	6650						
10E14	Wy	Huckleberry Divide	32	48N	115W	7300	BLACKFOOT RIVER												
10E9S	Wy	Lewis Lake Divide		44°13'		110°40'	7900	11G3	I	Austin Brothers Ranch	28	7S	43E	6400					
10F4	Wy	Moran	8 & 17	45N	114W	6800	11F17	I	Blue Ridge	35	2S	39E	6780						
10F3	Wy	Moran Bay	14	45N	116W	6800	11G22	I	Johnson Creek	4	9S	43E	6730						
10G6	Wy	Poison Meadows	29	30N	116W	8500	11G5S	I	Slug Creek Divide	15	10S	44E	7225						
10G8S	Wy	Salt River Summit	32	29N	118W	7900	11G1S	I	Somsen Ranch	25	5S	43E	7000						
10E12	Wy	Snake River Station	9	48N	115W	6780	11G19	I	Sulphur Peak	8	9S	43E	7070						
10F20	Wy	Snow King Mountain #3	4	40N	117W	7600	11G23	I	Wood Canyon Divide	5	9S	43E	7450						
HENRY'S FORK RIVER																			
11E9S	I	Big Springs	4	13N	44E	6400	FORT PORTNEUF RIVER												
11E35S	M	Black Bear	27	15S	5E	7950	12G7	I	Beaverdam Creek	22	10S	38E	6120						
11E18	I	Black Canyon	11	13N	45E	7960	12G16	I	Cold Springs	15	7S	37E	7000						
11E19	I	Black Moose	33	14N	45E	8160	12G5	I	Dempsey Creek	18	10S	38E	6100						
10E15S	Wy	Grassy Lake	6	48N	117W	7230	11G24	I	East Creek	26	10S	38E	7000						
11E10S	I	Island Park	28	13N	43E	6290	12G6	I	Lower Pebble	7	8S	38E	5780						
11E16	I	Latham Springs	9	13N	45E	7630	12G1	I	Mink Creek	33	7S	34E	6410						
11E14	I	Lucky Dog	2	13N	44E	6860	12G2	I	Pebble Creek	34	7S	37E	6550						
11E32	I	Sawtell Mountain	7	14N	43E	8720	12G14	I	Putnam	2	6S	37E	7220						
11E34	I	Targhee Pass	32	16N	44E	6980	11G17	I	Sedgwick Peak	30	10S	39E	7850						
11E8	I	Valley View	12	15N	43E	6680	12G15	I	Toponce	23	6S	37E	6160						
11E36	I	White Elephant	17	14N	43E	7710	12G17S	I	Wildhorse Divide	4	8S	34E	6490						
TETON RIVER																			
10F21	Wy	Darby Canyon	28	43N	118W	8250													
10F22	Wy	Freds Mountain	12	44N	118W	8150													
11F13	I	Garns Mountain	20	4N	44E	8300													
10F25	Wy	Indian Meadows	31	46N	117W	8240													
10F26	Wy	Jackpine Creek	15	46N	118W	7350													
11F12	I	McRenolds Reservoir	5	7N	46E	6720													
10F23S	Wy	Phillips Bench		43°31'		110°55'	8200												
11F2	I	Pine Creek Pass	24	3N	44E	6810													
11F1	I	State Line	32	3N	46E	6660													
10F13	Wy	Teton W.S.		43°30'		110°59'	7740												

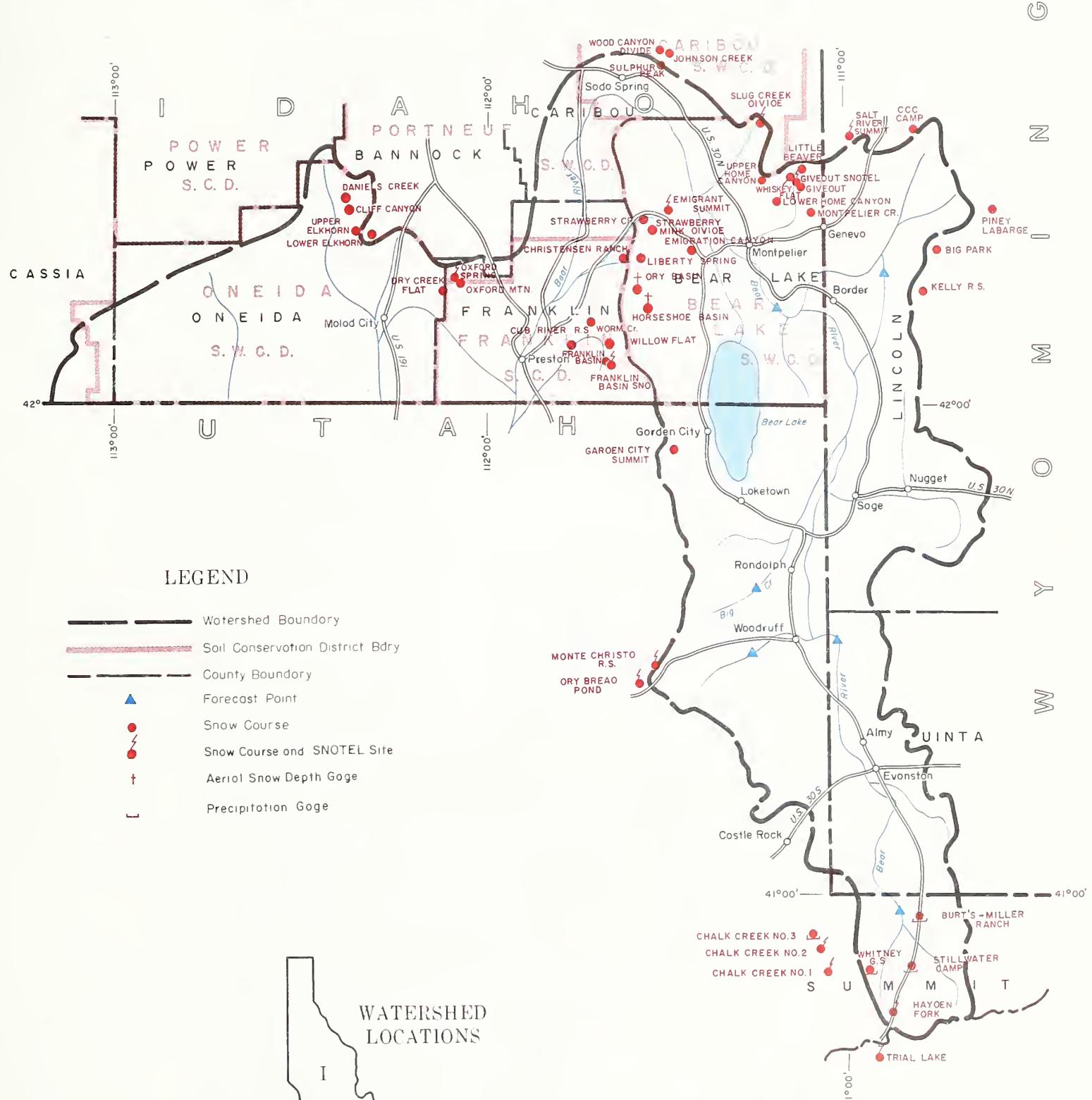
LEGEND

Numbering System (example)

10J7 Snow course only
10J7A Snow course and/or aerial marker
10J7S Snow course and snotel site
10J7R Radioactive gage

GREAT BASIN

25 0 25 50
SCALE IN MILES



LEGEND

- Watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- Snow Course and SNOTEL Site
- Aerial Snow Depth Gage
- Precipitation Gage



INDEX to SNOW COURSES

GREAT BASIN

No.	State	Name	Sec.	Twp.	Rge.
			Lat.	or And	Long.

BEAR RIVER

10G11	Wy	Big Park	7	27N	117W	8700
11H13P	U	Dry Bread Pond	19	8N	4E	8230
11G7	I	Emigration Canyon	24	12S	42E	6500
11H7P	U	Garden City Summit	35	14N	4E	7600
10J6P	U	Burts-Miller Ranch	19	3N	10E	7900
10J7P	U	Hayden Fork	1	1S	9E	9300
10G12	Wy	Kelly Ranger Station	13	26N	118W	8200
11H12P	U	Monte Cristo R. S.	3	8N	4E	8960
10G10	Wy	Piney LaBarge	19	29N	114W	8820
10J17P	U	Stillwater Camp	32	2N	10E	8550
10J28P	U	Whitney G. S.	4	1N	9E	9300

MONTPELIER CREEK

11G16	I	Giveout	2	12S	45E	6840
11G25S	I	Giveout Snotel	2	12S	45E	6930
11G20	I	Little Beaver	27	11S	45E	6970
11G27	I	Lower Home Canyon	17	12S	45E	7640
11G18	I	Montpelier Creek	14	12S	45E	6540
11G26	I	Upper Home Canyon	31	11S	45E	8560
11G21	I	Whiskey Flat	26	11S	45E	6960

MINK CREEK

11G11	I	Christensen Ranch	27	13S	41E	5560
11G14A	I	Dry Basin	30	13S	42E	7820
11G6S	I	Emigrant Summit	21	12S	42E	7390
11G15A	I	Horseshoe Basin	31	13S	42E	8000
11G13	I	Liberty Spring	7	13S	42E	8600
11G9	I	Strawberry Creek	9	13S	41E	5820
11G10	I	Strawberry Mink Divide	14	13S	41E	6720

CUB RIVER

11G12	I	Cub River Ranger Station	9	15S	41E	5450
11G8	I	Franklin Basin	1	16S	41E	8040
11G2S	I	Franklin Basin Sno	7	16S	42E	8170
11G4	I	Willow Flat	11	15S	41E	6070
11G28	I	Worm Creek	28	14S	41E	6620

MALAD RIVER

12G13	I	Cliff Canyon	13	12S	35E	7200
12G12	I	Daniels Creek	11	12S	35E	6270
12G4	I	Dry Creek Flat	33	13S	37E	6360
12G11	I	Lower Elkhorn	30	12S	36E	6960
12G3	I	Oxford Mountain	27	13S	37E	6800
12G18S	I	Oxford Spring	27	13S	37E	6740
12G10	I	Upper Elkhorn	25	12S	35E	7140

LEGEND

Numbering System (example)

10J7	Snow course only
10J7A	Snow course and/or aerial marker
10J7S	Snow course and snotel site
10J7R	Radioactive gage
10J7P	Precipitation gage

GOVERNMENT AGENCIES

States:

Idaho Department of Water Resources
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
 State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
 Forest Service
 ESCS Crop Reporting Service
 SEA Agricultural Research

U. S. Department of Commerce
 NOAA, National Weather Service

U. S. Department of the Interior
 Bonneville Power Administration
 Water and Power Resources Service
 Fish and Wildlife Service
 Water Resources Division, Geological Survey
 National Park Service
 Bureau of Land Management

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Mann Creek Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

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